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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/069,078	02/21/2002	Young Tae Son	108256-00016	9132
6449	7590	12/13/2004	EXAMINER	
ROTHWELL, FIGG, ERNST & MANBECK, P.C. 1425 K STREET, N.W. SUITE 800 WASHINGTON, DC 20005			LAYNO, CARL HERNANDZ	
		ART UNIT	PAPER NUMBER	
		3762		

DATE MAILED: 12/13/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>
	10/069,078	SON, YOUNG TAE
	<b>Examiner</b> <i>Carl H. Layno</i> Carl H. Layno 11/30/64	<b>Art Unit</b> 3762

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

1) Responsive to communication(s) filed on 21 February 2002.  
 2a) This action is FINAL.                    2b) This action is non-final.  
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

4) Claim(s) 1-13 is/are pending in the application.  
 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
 5) Claim(s) \_\_\_\_\_ is/are allowed.  
 6) Claim(s) 1,2,4 and 6-13 is/are rejected.  
 7) Claim(s) 3 and 5 is/are objected to.  
 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

9) The specification is objected to by the Examiner.  
 10) The drawing(s) filed on 21 February 2002 is/are: a) accepted or b) objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) All    b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413)
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	Paper No(s)/Mail Date. _____
3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>2/21/02</u> .	5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)
	6) <input type="checkbox"/> Other: _____

### **SUPPLEMENTAL ACTION**

1. Acknowledgment is made of applicant's amendment which was received by the Office on February 21, 2002. The Examiner apologizes for the confusion caused by the last Office action, which addressed the unmodified old set of PCT claims (claims 1-19) rather than the new set (claims 1-13). This action rectifies this confusion.

2. Claims 1-13, as amended, are active.

#### ***Priority***

3. Receipt is acknowledged of papers submitted under 35 U.S.C 119(a)-(d), which papers have been place of record in the file. This application is a 371 of PCT application PCT/KR01/00455, filed March 22, 2001.

#### ***Information Disclosure Statement***

4. Acknowledgment is made of applicant's Information Disclosure Statement (PTO-1449) which was received by the Office on February 21, 2002.

#### ***Drawings***

5. The drawings are objected to because pages 1-6 of the drawings (Figs.1-7) contain references to "WO 01/97904" and "PCT/KR01/00455" which should be deleted.. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to

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avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### *Specification*

6. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

Specifically, the Applicant should refrain from using the terminology "The present invention" (line 1 of the Abstract).

***Claim Objections***

7. Claims 9, 11, and 13 are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Specifically, as written, claims 9, 11, and 13 are method claims which depend from an apparatus base claim (claim 7). This appears to be a typographical error. To overcome this objection, the Examiner recommends changing the dependency of claim 9 to depend from method claim 8. In addition, the Examiner recommends changing the dependency of claim 11 to depend from either claim 8 or method claim 10.

***Claim Rejections - 35 USC § 112***

8. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

9. Claims 6, 7, 9, 11, and 13 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In regard to claim 6, there is no antecedent basis for the term “said transmitter” (line 1).

To overcome this rejection, the Examiner recommends changing this to the words “a transmitter”.

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In regard to claim 7, there is no antecedent basis for the term “said contacting means” (lines 1-2). To overcome this rejection, the Examiner recommends changing the claim dependency to depend from claim 6, where this term is initially defined.

In regard to claim 9, there is no antecedent basis in claim 9 for the reference to a “controlling step” (lines 1-2). This step is defined in claim 8, not in base claim 7. To overcome this rejection, the Examiner recommends changing the dependency of claim 9 to depend from method claim 8.

In regard to claim 13, there is no antecedent basis for the term “the predetermined heart rate reference”. To overcome this rejection, the Examiner suggests changing this using the words “a predetermined heart rate reference”.

Claim 11 is also rejected since it depends from rejected base claim 7.

### ***Claim Rejections - 35 USC § 102***

10. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

11. Claims 1, 2, and 8-10 are rejected under 35 U.S.C. 102(b) as being anticipated by Trulaske et al ‘504 or Hall-Tipping ‘069.

The Turlaske et al ‘504 patent discloses a treadmill exercise device (Fig.1) including circuits (Fig.4A) for measuring the user’s heart rate **82** and a system controller **30** for comparing the user’s measured heart rate with a scheduled target heart rate (Fig.4B – see also decision box

**122** of Fig. 5A) from which is derived control information for incrementing **148** (Fig.5C) or decrementing the speed of the exercise device **160** (Fig.5C). Alternatively, the grade, or slope, of the treadmill may be controlled based upon the heart rate comparison (see boxes **152,156** of Fig.5C).

In regard to claims 2 and 10, if the measured heart rate exceeds by 20 beats per minute the target heart rate, then an alarm **100** (Fig.4A) is activated (col.8, lines 33-36).

The Hall-Tipping '069 patent describes a combination exercise device (bicycle/video game) (Fig1) including a measuring means (i.e. sensor) for measuring a person's heart rate (i.e. aerobic activity) **20** and a processor **14**, which compares the measured heart rate with a target heart rate (THR) and controls the play of the device depending upon this comparison. Specifically, the resistance/speed of the bicycle portion of the game is either increased or decreased depending upon the difficulty of play of the video game and the detected heart rate of the player (col.5, line 25 thru col.6, line 50). The aerobic activity sensor **20** may be an earlobe clip or chest-mounted heart rate sensor (col.4, lines 5-7).

In regard to claim 10, applicant's attention is directed to Fig.2, which shows the use of a warning message **46**, which is activated when the player's heart rate exceeds a predetermined threshold.

12. Claims 4 and 12 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Fuxne et al '178.

The Fuxne et al '178 patent also discloses a device (Fig.1) having a pulse generator/oscillator **30** connected to electrode pads **60A,60B** for transmitting low frequency

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signals (0.1-100 Hz) (col.3, lines 25-26) to a patient. Its small size and light weight enable the device of Fuxne et al to be carried everywhere and for doing “all kinds of physical exercises” (col.3, lines 31-34). It would be obvious, if not inherent, to assume that an individual equipped with this device could conceivably participate in activities such as step classes or low/high impact aerobics classes. The stimulation therapy is to be combined with physical exercise therapy to make treatment more effective (col.3, lines 38-41).

13. Claim 4 rejected under 35 U.S.C. 102(b) as being anticipated by Petrofsky et al ‘830.

The Petrofsky et al ‘830 patent discloses an exercise apparatus (Figs.1 and 2) comprising a stimulator **50** (Fig.1) for generating electrical pulses and electrodes **15a,15b,15c**, which perform the function of applicant’s “transmitter” for supplying the electrical pulses to a person doing exercise on the apparatus. The apparatus of Petrofsky et al includes circuits (Fig.1) for producing low frequency signals in the range from 55Hz to 65Hz (col.5, lines 19-20 – See Fig.8). Although the device was primarily designed for those individuals undergoing muscular rehabilitation, it is conceivable that a person already in an aerobic state may use this device (i.e. someone having worked out previously on another exercise apparatus or having come from an aerobics class).

***Allowable Subject Matter***

14. Claims 3 and 5 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Conclusion***

15. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The Ostrow '134 patent, like applicant's claimed device, describes a device (Fig.7) comprising pulse generator 55 and transmitter circuits for applying low frequency signals to a wearer. Due to its size, however, it is highly unlikely that any aerobic exercises can be performed while wearing it.

McLeod et al '13 patent is cited for its pertinent low frequency generator and electrode pads. Unlike applicant's claimed device, however, that of McLeod et al '413 does not appear to be used in conjunction with exercise.

16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Carl H. Layno whose telephone number is (571) 272-4949. The examiner can normally be reached on Monday thru Thursday from 9 AM to 6 PM and every other Friday between 9AM and 5PM. A voice mail or E-mail message ([carl.layno@uspto.gov](mailto:carl.layno@uspto.gov)) may be left if desired.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Angela Sykes, can be reached on (571) 272-4955. All faxed correspondence should be sent to the Office's Official FAX number (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to Legal Instruments Examiner (LIE) Brenda Webb whose telephone number is (571) 272-4399.

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Carl H. Layno

CARL LAYNO  
PRIMARY EXAMINER

CHL  
11/30/2004